This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1 - 18. (Cancelled)

19. (Currently amended) The electrical feedthru ~~apparatus~~ of claim 33 [[1]], wherein the conductive pin ~~electrically conductive transmission line~~ and the body ~~housing~~ are attached by a radial compression fit.

20. (Currently amended) The electrical feedthru ~~apparatus~~ of claim 33 [[1]], further comprising a plurality of ~~electrically~~ conductive pins ~~transmission lines~~ each coated with a highly dielectric diamond-like carbon coating or diamond thin film ~~dielectric coating~~ spaced from one another and attached within the body ~~housing~~.

21. (Currently amended) The electrical feedthru ~~apparatus~~ of claim 20, wherein a density of the ~~electrical~~ conductive pins ~~transmission lines~~ within the body ~~housing~~ is greater than 0.32 pins ~~transmission lines~~ per mm^2.

22. (Currently amended) The electrical feedthru ~~apparatus~~ of claim 21, wherein the density of the ~~electrical~~ conductive pins ~~transmission lines~~ within the body ~~housing~~ is at least 0.4 pins ~~transmission lines~~ per mm^2.

23. (Currently amended) The electrical feedthru ~~apparatus~~ of claim 22, wherein a density of the ~~electrical~~ conductive pins ~~transmission lines~~ within the body ~~housing~~ is at least 0.8 pins ~~transmission lines~~ per mm^2.

24. (Cancelled)

25. (Cancelled)

26. (Currently amended) An apparatus comprising:

a MEMS electrical feedthru, the MEMS electrical feedthru comprising:

an outer body;

a conductive pin extending through opposite ends of and attached to ~~disposed in~~ the outer body;

an electrically insulating diamond-like carbon or diamond thin film micro-coating between the conductive pin and the outer body.

27. (Previously presented) The apparatus of claim 26, wherein the insulating coating is less than 100 μm thick.

28. (Previously presented) The apparatus of claim 27, wherein the insulating coating is less than 5 μm thick.

29. (Previously presented) The apparatus of claim 28, wherein the insulating coating is less than 2 μm thick.

30. (Currently amended) An electrical feedthru apparatus comprising:

a body;

a plurality of conductive pins extending through opposite ends of and attached to the body and having diamond-like carbon coatings or diamond thin films electrically insulating each of the conductive pins from the body;

wherein the conductive pin density comprises at least 0.4 pins per mm^2.

31. (Original) The electrical feedthru apparatus of claim 30, wherein the conductive pin density comprises at least 0.8 pins per mm^2.

32. (Canceled)

33. (Currently amended) An electrical feedthru comprising:

a body;

a conductive pin; and

a highly dielectric diamond-like carbon coating or diamond thin film adhered to at least a portion of the conductive pin;

wherein the conductive pin extends through opposite ends of and is attached to the body.

34. (Canceled)

35. (Previously presented) The electrical feedthru of claim 33, wherein the diamond-like carbon coating or diamond thin film comprises multiple layers.

36. (Original) The electrical feedthru of claim 35, wherein a first of the multiple layers is less than 1 μm thick, and subsequent layers range between 1 and 10 μm thick.

37. (Currently amended) An apparatus comprising:

an electrical feedthru adapted for a MEMS device, the electrical feedthru comprising:

a conducting pin;

a diamond-like carbon coating or diamond thin film adhered to the conducting pin;

a body attached around the diamond-like carbon coating or diamond thin film, the pin extending through opposite ends of the body.

38. (Previously presented) The apparatus of claim 37, further comprising a plurality of conducting pins each coated with a diamond-like carbon coating or diamond thin film disposed in the body.

39. (Previously presented) The apparatus of claim 37, wherein the diamond-like carbon coating or diamond thin film comprises a first layer of 0.2 to 10 μm thick.

40. (Currently amended) A multi-pin feedthru comprising:

a plurality of conductive pins extending through opposite ends of a single body sized for use with a MEMS device, each of the plurality of conductive pins being spaced from one another; and

at least one thin film layer of diamond-like carbon coating or diamond thin film dielectric material on ~~disposed over~~ each of the plurality of conducting pins providing electrical insulation between the pins and the body.

41. (Original) The multi-pin feedthru of claim 40, wherein each of the plurality of conductive pins is substantially parallel to the others.

42. (Original) The multi-pin feedthru of claim 40, wherein the plurality of conductive pins comprises at least six pins arranged within no more than a 4 mm diameter.

43. (Cancelled)

44. (Original) The multi-pin feedthru of claim 40, wherein the at least one thin film layer is between 0.2 and 10 μm thick.

45. (Currently amended) An electrical feedthru comprising:

an electrically conductive pin;

an electrically insulative, thermally conductive diamond-like carbon coating or diamond thin film adhered to the electrically conductive pin;

wherein the electrically conductive pin is hermetically sealed to a body through which the electrically conductive pin traverses, the pin extending from opposite ends of the body.

46. (previously presented) The electrical feedthru of claim 45, wherein the body comprises an outer taper.

47. (Cancelled)

48. (Previously presented) The electrical feedthru of claim 45, wherein the electrically insulative, thermally conductive diamond-like carbon coating or diamond thin film comprises one or more layers ranging between 0.2 and 10 μm in thickness.

49-56. (Cancelled)

57. (Currently amended) An apparatus comprising:

a micro-electro-mechanical-system (MEMS) package;

an electrical feedthru electrically attached to the MEMS package and disposed between two distinct environments, the electrical feedthru comprising:

a housing;

a pin ~~an electrical pathway~~ passing through and attached to the housing; and

a diamond-like carbon coating or diamond thin film electrical isolator less than about 500 μm thick disposed between the housing and the pin ~~electrical pathway~~.

58. (Original) The apparatus of claim 57, wherein the electrical isolator is less than 100 μm thick.

59. (Cancelled)

60. (Previously presented) The apparatus of claim 57 wherein the electrical isolator comprises one or more layers ranging between approximately 0.2 and 10 μm in thickness.

61. (Currently amended) A method of making an electrical feedthru comprising coating a conductive pin with a layer of highly dielectric diamond-like carbon coating or diamond thin film material and attaching the conductive pin within and extending through opposite ends of a housing.

62. (Original) The method of claim 61, wherein the coating is about 10 μm thick or less.

63. (Original) The method of claim 61, further comprising coating the conductive pin with multiple layers of highly dielectric material.

64. (Cancelled)

65. (Original) The method of claim 61, further comprising applying a dielectric adhesive to the housing, the conductive pin, or both the housing and the conductive pin to attach the conductive pin to the housing.

66. (Original) The method of claim 61, wherein the attaching comprises:

metalizing an outer surface of the conductive pin over the layer of highly dielectric material; and

brazing the conductive pin to the housing.

67. (Previously presented) The method of claim 61, wherein the attaching comprises:

heating the housing to a temperature above ambient;

inserting the conductive pin in a corresponding hole in the housing; and

cooling the housing to compress the conductive pin within the housing.

68. (Original) The method of claim 67, wherein the attaching further comprises providing mating tapered surfaces to the conductive pin and the housing.

69. (Currently amended) A method of controlling capacitance of an electrical feedthru comprising coating a conductive pin with one or more micro-layers of diamond-like carbon coating or diamond thin film dielectric material and attaching ~~placing~~ said conductive pin within and extending through opposite ends of, a housing.

70. (Original) The method of claim 69, further comprising varying the thickness of the one or more micro-layers of dielectric material.

71. (Cancelled)

72. (Original) The method of claim 69, further comprising adding a layer of adhesive over the one or more micro-layers of dielectric material.

73. (Cancelled)

74. (Cancelled)

75. (Currently amended) A method of making an electrical feedthru comprising coating an inner surface of a hole through a housing with a layer of highly dielectric diamond-like carbon coating or diamond thin film material and attaching a conductive pin within the hole, the pin extending from opposite ends of the housing.